Claims

1. A method of drilling a deviated portion of a borehole and positioning a fluid permeable tubular therein, comprising:

positioning a bottom hole assembly downhole, the bottom hole assembly including a downhole motor with a drill shaft having an upper section with an upper central rotational axis and a lower central rotational axis offset at a bend having a selected bend angle from the upper central rotational axis, a bit having a bit face, and a gauge section, the bit face defining a bit cutting diameter, the gauge section having an axial length of at least 60% of the bit cutting diameter;

rotating the bit and the gauge section to drill a borehole portion;

inserting a fluid permeable tubular having a run-in diameter at a desired location within the drilled borehole portion; and

radially expanding the fluid permeable tubular within the drilled borehole portion to an expanded diameter greater than the run-in diameter.

2. A method as defined in Claim 1, wherein radially expanding the downhole fluid permeable tubular to the expanded diameter comprises radially expanding the fluid permeable tubular to be in contact with an open hole portion of the wellbore.

3. A method as defined in Claim 1, wherein the bottom hole assembly comprises:

any one of a positive displacement motor and a rotary steerable assembly.

4. A method as defined in Claim 1, wherein the bottom hole assembly comprises a positive displacement motor, and wherein an axial spacing between the bend and the bit face is less than 12 times the bit cutting diameter.

5. A method as defined in Claim 1, wherein the gauge section has an axial length of at least 75% of the bit cutting diameter.

6. A method as defined in Claim 1, wherein at least 50% of the axial length of the gauge section has a uniform diameter cylindrical bearing surface.

7. A method as defined in Claim 1, wherein the run-in diameter of the fluid permeable tubular requires less than 15% expansion downhole.

8. A method as defined in Claim 1, wherein the run-in diameter of the fluid permeable tubular requires less than 10% expansion downhole.

9. A method as defined in Claim 1, wherein the ratio of the run-in diameter to a wall thickness of the tubular member is expressed by the function:

$$D/T \geq 10 + 2.5*(D - 3)$$

where D is the run-in diameter and T is the wall thickness measured in inches.

10. A method as defined in Claim 1, wherein the ratio of the run-in diameter to a wall thickness of the tubular member is at least 20.

11. A method as defined in Claim 1, wherein an axial length of the fluid permeable tubular is at least 150 times the run-in diameter of the fluid permeable tubular.

12. A method as defined in Claim 1, further comprising:

drilling the deviated portion of the borehole more than 5000 feet in a substantially horizontal direction; and

positioning at least a portion of the fluid permeable tubular member more than 5000 feet in the substantially horizontal direction within the deviated portion of the borehole.

13. A method as defined in Claim 1, wherein rotating the bit comprises:

at least one of pumping fluid through the downhole motor and rotating the drill string from the surface.

14. A method of drilling a deviated portion of a borehole and positioning a fluid permeable tubular therein, comprising:

positioning a bottom hole assembly downhole, the bottom hole assembly including a downhole motor with a drill shaft having an upper section with an upper central rotational axis and a lower central rotational axis offset at a

selected bend angle from the upper central axis, a bit including a bit face, and a gauge section, the bit face defining a bit cutting diameter, the gauge section having an axial length of at least 75% of the bit cutting diameter;

rotating the bit and the gauge section to drill a borehole portion;

inserting a fluid permeable tubular with a run-in diameter at a desired location within the drilled borehole portion, the run-in diameter selected to expand less than 15%; and

radially expanding the downhole fluid permeable tubular within an open hole portion of the borehole to place the fluid permeable tubular in contact with the open hole portion of the wellbore.

15. A method as defined in Claim 14, wherein at least 50% of the axial length of the gauge section has a uniform diameter cylindrical bearing surface.

16. A method as defined in Claim 14, wherein the downhole fluid permeable tubular is radially expanded less than 10%.

17. A method as defined in Claim 14, wherein the ratio of the run-in diameter to a wall thickness of the tubular member is expressed by the function:

$$D/T \geq 10 + 2.5*(D - 3)$$

where D is the run-in diameter and T is the wall thickness, measured in inches.

18. A method as defined in Claim 14, wherein the ratio of the run-in diameter to a wall thickness of the tubular member is at least 20.

19. A method as defined in Claim 14, wherein an axial length of the fluid permeable tubular is at least 150 times the run-in diameter of the fluid permeable tubular.

20. A method as defined in Claim 14, wherein the bottom hole assembly comprises:

any one of a positive displacement motor, and a rotary steerable assembly.

21. A method as defined in Claim 14, further comprising:

drilling the deviated portion of the borehole more than 5000 feet in a substantially horizontal direction; and

positioning at least a portion of the fluid permeable tubular member more than 5000 feet in the substantially horizontal direction within the deviated portion of the borehole.

22. A method as defined in Claim 14, wherein rotating the bit comprises:

at least one of pumping fluid through the downhole motor, and rotating the drill string from the surface.

23. A method as defined in Claim 14, further comprising:

recovering hydrocarbons from the formation through the fluid permeable tubular..

24. A subterranean well system comprising:

a bottom hole assembly including a downhole motor with a drill shaft having an upper section with an upper central rotational axis and a lower central rotational axis offset by a bend at a selected bend angle from the upper central rotational axis;

a bit having a bit face, and a gauge section, the bit face defining a bit cutting diameter, the gauge section having an axial length of at least 60% of the bit cutting diameter, to drill a deviated borehole portion; and

a fluid permeable tubular to insert in the deviated borehole portion, having a run-in diameter, the fluid permeable tubular to be radially expanded to an expanded diameter greater than the run-in diameter to place the expanded diameter fluid permeable tubular in contact with the drilled borehole portion of the deviated borehole.

25. A subterranean well system as defined in Claim 24, wherein the bottom hole assembly comprises:

at least one of a positive displacement motor and a rotary steerable assembly.

26. A subterranean well system as defined in Claim 24, wherein the bottom hole assembly comprises a positive displacement motor, and wherein an axial spacing between the bend and the bit face is less than 12 times the bit cutting diameter.

27. A subterranean well system as defined in Claim 24, wherein the gauge section has an axial length of at least 75% of the bit cutting diameter.

28. A subterranean well system as defined in Claim 24, wherein at least 50% of the axial length of the gauge section has the uniform diameter cylindrical bearing surface.

29. A subterranean well system as defined in Claim 24, wherein the run-in diameter of the fluid permeable tubular requires less than 15% expansion downhole.

30. A subterranean well system as defined in Claim 24, wherein the run-in diameter of the fluid permeable tubular requires less than 10% expansion downhole.

31. A subterranean well system as defined in Claim 24, wherein the ratio of the run-in diameter to a wall thickness of the tubular member is expressed by the function:

$$D/T \geq 10 + 2.5*(D - 3)$$

where D is the run-in diameter and T is the wall thickness measured in inches.

32. A subterranean well system as defined in Claim 24, wherein the ratio of the run-in diameter to a wall thickness of the tubular member is at least 20.

33. A subterranean well system as defined in Claim 24, wherein an axial length of the fluid permeable tubular is at least 150 times the run-in diameter of the fluid permeable tubular.

34. A subterranean well system as defined in Claim 24, further comprising:

the deviated borehole extending more than 5000 feet in a substantially horizontal direction; and

at least a portion of the fluid permeable tubular member positioned more than 5000 feet in the substantially horizontal direction within the deviated borehole.